L 43088-65

ACCESSION NR: AT5007918

sections, some of which are utilized for input and exit of beams. The super-period design is described. The lengthened sections were obtained as a consequence of shortening the focusing and defocusing blocks by 112 cm. The focusing properties of the magnetic channel were diminished consequently, but very little; and the limiting energy was lowered by 2-3 Gev. The construction of the magnet is described. Each of the magnetic blocks is divided lengthwise into 5 sub-blocks which are enveloped by the common winding. These sub-blocks consist of laminar two-millimeter silicon steel. These steel sheets were stamped out without subsequent mechanical working, and were subjected to sorting and intermixing in order to smooth out their magnetic characteristics. The sub-blocks are constricted by lateral welded plates without adhesion. Provision was made for windings on the poles in order to correct for pole nonlinearity and for variations in the drop reading. These windings make it possible to introduce artificial quadratic (square) nonlinearity that changes the dependence of the frequency of transverse oscillations during a pulse. In order to correct for straying of the residual field, provision has been made for windings on the yoke in series with the main winding. The sub-blocks must undergo calibration on a magnet stand in order to make correcting systems more precise and to determine the most convenient disposition of the sub-blocks along the ring. The winding of the electromagnet is made of aluminum busbars with hollow cores for cooling water. The length of the busbar is so selected that there would be no

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welded joints inside the coils. The winding consists of 4 sections, two of which are disposed on the upper pole and two on the lower. The most important character-istics of the electromagnet and power supply system are described in a table. Also described are the vacuum chamber and accelerating field (obtained by 53 paired resonators with ferrite rings, which operate at the 30-th harmonic of revolution and give accelerating potential of 350 kilovolts). The ring tunnel and the general arrangement of the accelerator are shown in figures and described. The building for the injector and portions of the ring tunnel from the injector to the experi-mental room have been completed in the main and are ready for installation of equipment. This room, in the form of a single-aisle building without internal supports, permits one to work on beams brought into the inner and outer sides. A 90-meter arch covers this room, whose overall length is 150 meters. Provisions have been made for a second experimental room at the southwest part of the ring. Orig. has 4 figures, 2 tables.

ASSOCIATION: Institute teoreticheskoy i eksperimental'noy fiziki GKAE SSSR (Institute of Theoretical and Experimental Physics, GKAE SSSR), (2) Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury imeni D. V. Yefremova GKAE SSSR (Scientific Research Institute of Electrophysical Apparatus, GKAE SSSR),

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L 43038-65

ACCESSION NR: AT5007918

(3) Radiotekhnicheskiy institute AN SSSR (Radio Engineering Institute, Academy of Sciences SSSR). (4) Gosudarstvennyy proyektnyy institut GKAE SSSR (State Planning Institute, GKAE SSSR).

SUBMITTED: 26May64

NO REF SOV: 002

ENCL: 00

OTHER: 001

SUB CODE: EE, NP

Card 4/4

CHIRKOV, Sergey Leonidovich; KUZ'MIN, V.G., red.; LOBANOV, Ye.M.,
red. izd-va; RIDNAYA, I.V., tekhn. red.

[Guide to safety measures for marine engine and steering
gear operators on ships of the river fleet] Pamiatka po
tekhnike bezopasnosti dlia motoristov-rulevykh sudov rech-
nogo flota. Moskva, Izd-vo "Rechnoi transport," 1962. 55 p.
                                              (MIRA 16:6)

    (Inland navigation—Safety measures)
      (Marine engineering—Safety measures)

Kuz'miN V. G

4

Conjugated reactions of addition of halogens to olefins. IV. Preparation of β-haloethyl esters of formic, acetic, chloroacetic and trichloroacetic acids. A. I. Titov, E. E. Maklyaev, and V. G. Kuz'min. Zhur. Obshchei Khim. 25, 707-11(1955)(Engl. translation); cf. C.A. 49, 13685c.—Into 63 ml. AcOH was passed for 2 hrs. 10.2 l. Cl and 22.3 l. C$_2$H$_4$ with very vigorous stirring; after washing with H$_2$O and NaOH there was obtained 83.1 g. ClCH$_2$CH$_2$OAc, b. 143-5°, d$_4$ 1.1405, n$_D$ 1.4255. If 12 l. Cl and 14 l. C$_2$H$_4$ are passed into AcOH as above with addn. of 32 g. Hg(OAc)$_2$ just before passage and a similar amt. being added at the half-point in the reaction, the yield of the ester reaches 67%. C$_2$H$_4$ (5 l.) was passed into 50 ml. AcOH, 49 g. Hg(OAc)$_2$, and 30 g. Br over 1 hr., yielding as above about 85% BrCH$_2$CH$_2$OAc, b. 160-61°. Passage of 22 l. Cl and 28 l. C$_2$H$_4$ at 30° into 92 g. HCOOH (d. 1.2) gave 83.1 g. ClCH$_2$CH$_2$O·CH, b. 129-30°, d ... n ... Passage ... 100 g. CCl$_3$COOH ... 117°, b$_{10}$ 165-166° (render) ... ClCH$_2$CH$_2$O$_2$CCCl$_3$, b. 105-8° ... G. M. Kosolapoff

KUZ'MIN, V.G.

Conjugated reactions of addition of halogens to olefins. V.
β-Haloalkylation at nitrogen. A.I. Titov and V.G. Kuz'min.
Zhur. Obshchei Khim. 26, 1391-?

3(2)
AUTHOR: Kuz'min, V. G.

S/006/60/000/02/016/024
B007/B011

TITLE: The Percent Circle

PERIODICAL: Geodeziya i kartografiya, 1960, Nr 2, p 63 (USSR)

ABSTRACT: Cartographers often have to draw circle diagrams, the statis-
            tical data of which are expressed in percents. Only few minutes
            are needed for an ordinary diagram. If, however, the carto-
            grapher has compiled an industrial map of a territory with,
            say, 50 industrial centers and more, he will require several
            hours for the task. The figure shows an instrument, by the aid
            of which the diagram can be constructed directly according to
            the percents. This instrument is a circle which is graduated
            into 100 parts and where each graduation corresponds to one
            percent. The author demands that such instruments be produced
            commercially. There is 1 figure.

Card 1/1

KLEBANOV, Boris Vladimirovich, inzh.; KUZ'MIN,Vladimir Grigor'yevich,
inzh.; OREKHOV, Pavel Aleksandrovich, inzh.; PROSHIN, Georgiy
Aleksandrovich, kand.tekhn.nauk; LEONOV,I.S., inzh.retsenzent;
SOROKIN,A.A., inzh.retsenzent; SERDYUK,V.K., inzh.,glav.red.
MAYEVSKIY,V.V., inzh. red.; GORNOSTAYPOL'SKAYA,S.M., tekhn.
red.

[Repairing motor vehicles and tractors] Remont avtomobilei i
traktorov. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.
lit-ry. Pt.1, 1961. 335 p.
(MIRA 14:5)

(Motor vehicles—Maintenance and repair) (Tractors—
Maintenance and repair)

KLEBANOV, Boris Vladimirovich, inzh.; KUZ'MIN, Vladimir Grigor'yevich, inzh.; MASLOV, Vladimir Ivanovich, inzh.; LEONOV, I.S., inzh., retsenzent; SOROKIN, A.A., inzh., retsenzent; PILIPENKO, Yu.P., inzh., red.; GORNOSTAYPOL'SKAYA, M.S., tekhn. red.

[Repair of motor vehicles and tractors]Remont avtomobilei i trak-torov. Pod red. B.V.Klebanova. Moskva, Mashgiz. Pt.2. 1962. 301 p.
(MIRA 16:2)

(Motor vehicles—Maintenance and repair)
(Tractors—Maintenance and repair)

KUZ'MIN, V.G. (Leningrad, 3, Bol'shoy prospekt, 3-a, kv. 44)

Method of exfoliative cytodiagnosis of tumors of the urinary
bladder. Vop. onk. 8 no.11:97-99 '62.   (MIRA 17:6)

1. Iz urologicheskogo otdeleniya (zav.- prof. I.N. Shapiro
[deceased] i laboratorii eksperimental'noy morfologii
(ispolnyayushchiy obyasannosti zaveduyushchego - doktor med.
nauk M.P. Ptokhov) Instituta onkologii AMN SSSR (dir. -
deystvitel'nyy chlen AMN SSSR, prof. A.I. Serebrov).

KUZ'MIN, V.G.

Comparative evaluation of the effectiveness of some methods
of vaccine chemotherapy in patients with acute dysentery.
Zhur. mikrobiol., epid. i immun. 33 no.11:143-148 N '62.

(MIRA 17:1)

1. Iz Chitinskogo meditsinskogo instituta i Chitinskoy
gorodskoy bol'nitsy.

KUZ'MIN, V.G.

Exfoliative cytodiagnosis of bladder tumors. Vop. onk. 9
no.11:68-73 '63.   (MIRA 18:2)

1. Iz urologicheskogo otdeleniya (zav.- prof. I.N. Shapiro
[deceased]) i laboratorii eksperimental'noy morfologii (zav.-
doktor med. nauk M.P. Ptokhov) Instituta onkologii AMN SSSR
(dir.- deystvitel'nyy chlen AMN SSSR prof. A.I. Serebrov).
Adres avtora: Leningrad, ul. Chaykovskogo, 7, urologicheskoye
otdeleniye Instituta onkologii AMN SSSR.

AYZENBERG, B.L.; BOLOTOV, V.V.; BRIL', R.Ya.; GERASIMOV, V.N.; GREKOV, V.I.;
DOVETOV, M.Sh.; KAMENSKIY, M.D.; KLEBANOV, L.D.; KONSTANTINOV, B.A.;
KUZ'MIN, V.G.; LYUBAVSKIY, V.I.; MELENT'YEV, L.A.; MIKHALEV, N.N.;
POLYANSKIY, V.A.; RAZDROGINA, L.A.; SIVAKOV, Ye.R.; STARIKOV, V.G.;
SAVASHINSKAYA, V.I.; SHAYOVICH, L.L.

Igor' Valentinovich Gofman, 1903-1963; obituary. Trudy LIEI
no.51:3-4 '64.   (MIRA 18:11)

KUZ'MIN, V.G.

Consolidated determination of labor input for general overhauling
of thermal and mechanical equipment of electric power plants. Trudy
LIMI no.19:201-217 '57.   (MIRA 11:6)
            (Electric power plants—Maintenance and repair)

KUZ'MIN, V.G., inzh.

Problems of raising the effectiveness of the centralized repair
of thermal and mechanical equipment in power systems. Trudy LIEI
no.29:69-103 '59.   (MIRA 13:5)
        (Steam power plants)

KUZ'MIN, V.G., inzh.

Meeting on questions of operational planning for electric power plants and power systems. Elek.sta. 31 no.6:91-92 Je '60.
(MIRA 13:7)

(Electric power plants)
(Electric power distribution)

L 05074-67 EWT(d)

ACC NR: AP6013321 (N)   SOURCE CODE: UR/0413/66/000/008/0137/0138

AUTHORS: Muratikov, L. N.; Otvagin, Ye. F.; Chentsov, B. V.; Tsypina, S. F.; Kuz'min, V. G.

ORG: none

TITLE: An automatic steering device for a ship. Class 65, No. 180974

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 8, 1966, 137-138

TOPIC TAGS: ship component, ship navigation, rudder, automatic central design

ABSTRACT: This Author Certificate presents an automatic steering device for a ship. The device includes a gyro induction compass with a course angle signal controller coupled with the course angle signal receiver of the follow-up system and with the output signal amplifier. The device also contains coarse and fine readout scales, reducing gear trains, and a tachometer-generator. The design increases the reliability of the automatic stabilization of the motion to any current value of the course and insures smooth turns of the ship with a given angular circulation rate. The course angle signal controller of the gyro induction compass and the receiver of the follow-up system are connected by electrical circuits. The motor of the follow-up system processes the cumulative signal of the controller and receiver. The stator of the course angle controller and the tachometer-generator are kinematically connected with the reducing gear train of the follow-up system when the controller rotor is stationary.
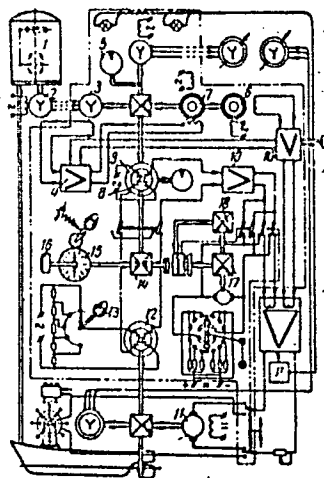
UDC: 629.12.014.6-523

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ACC NR: AP6013321

The reducing gear train generates electric signals proportional to the deviation of the ship from the course and to the angular rate of the change of the course. Each of the signals enters the amplifier and is sent to the operating motor of the rudder cross arm (see Fig. 1).

Fig. 1. 1 - gyro induction compass; 2 - course angle signal detector; 3 - signal receiver; 4 - output signal amplifier; 5 - fine readout scale; 6 - tachometer-generator; 7 - motor of the follow-up system; 8 - stator of the course angle controller; 9 - rotor of the course angle controller; 10 - amplifier; 11 - operating motor of the rudder cross arm; 12 - rudder negative feedback detector; 13 - negative feedback coefficient regulator; 14 - reducing gear train of the turn controller of the ship; 15 - scale of a given change of the course; 16 - crank; 17 - motor-integrator; 18 - reducing gear train

The reducing gear train generates electric signals proportional to the deviation of the ship from the course and to the angular rate of the change of the course. Each of the signals enters the amplifier and is sent to the operating motor of the rudder

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L 05074-67

ACC NR: AP6013321

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cross arm (see Fig. 1). The rotor of the controller is electrically connected with the negative feedback detector. This feedback detector is equipped with a negative feedback coefficient regulator. The rotor of the course controller is kinematically connected with the reducing gear train of the turn controller of the ship for a relative given course. This turn controller reducing gear is equipped with a course change scale, a friction clutch, and with a crank which is used for establishing the new course readout on the scale. To match the position of the course controller rotor with the stator, the rotor winding may be connected to the input of the amplifier, and the negative feedback detector winding may be disconnected. To make the selection of the integration coefficient more precise, the output axis of the motor-integrator is connected to the mechanical differential by a reducing gear train. Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 02Apr64

Card 3/3   fv

KUZ'MIN, V.G.

Effect of pentoxyl, a derivative of the pyrimidine group, combined
with chemo- and vaccine therapy on the course of acute dysentery
in adults. Report No.1: Effect of pentoxyl combined with anti-
bacterial preparations on the course of acute dysentery. Zhur.
mikrobiol., epid. i immun. 41 no.1:53-59 Ja '64.

(MIRA 18:2)

1. Chitinskiy meditsinskiy institut.

KUZ'MIN, V.I., inzhener.

Some problems in economizing metal and improving the serviceability of FB-1, 9 peat cutters. Sel'khozmashina no.8:22-23 Ag '56.   (MLRA 9:10)

1. Sibirskaya mashinoispytatel'naya stantsiya.
(Peat machinery)

18.8100

25937
S/136/61/000/008/005/005
E193/E135

AUTHORS: Kapustina, M. I., Candidate of Technical Sciences;
             Karnaushenko, N. A., Engineer; Savchenko, A. M.,
             Engineer; and Kuz'min, V. I., Engineer.

TITLE: Determination of thermo-physical properties of a
             titanium alloy 48-OT-3 (48-OT-3)

PERIODICAL: Tsvetnyye metally, 1961, No.8, pp. 73-79

TEXT: Knowledge of the thermo-physical properties of metals
and alloys is necessary in selecting both the rational heating
schedules during various fabrication processes and the optimum
operating conditions for components subjected to variations in the
ambient temperature. The object of the present investigation was
to determine the thermal conductivity (λ, kcal/m h °C), specific
heat (C, kcal/kg °C), and the thermal diffusivity (a, mm^2/h)
(a = $\lambda/C\gamma$, where γ is the density of the material) of the
48-OT-3 Ti-base alloy. This alloy contained 3.5-4.0% Al, not more
than 0.1% nitrogen, 0.1% oxygen and traces of hydrogen. The
measurements were carried out at temperatures ranging from 100 to
1025 °C. The magnitude of a and C only was determined;
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λ was calculated from these data ($\lambda = aC\gamma$), the appropriate correction being applied for the thermal expansion of the alloy. The bulk of the paper is devoted to a detailed description of the experimental technique and equipment used. A technique developed by N.Yu. Tayts and E.M. Gol'dfarb (Ref.2: Zavodskaya laboratoriya, 1950, No.3) and based on a method proposed by G.M. Kondrat'yev (Ref.1: Teplovyye izmeneniya (book "Thermal Changes"), Mashgiz, 1957) was used by the present authors for the determination of a. The method consists in solving the differential equation of the thermal diffusivity for a slab heated at a constant rate. If the temperature gradient between the surface and the axis of a cylindrical slab at the initial moment is Δt_0, then

$$\frac{\Delta t}{v \, \tau} = \frac{R^2}{4a \, \tau} - \left(\frac{R^2}{a \, \tau} - \frac{4 \Delta t_0}{v \, \tau}\right) \Phi\left(\frac{a \, \tau}{R^2}\right) \qquad (1)$$

where: v is the constant heating rate ($^{\circ}$C/h); τ is the time (h); a is the thermal diffusivity (mm^2/h); and $\Phi(a\tau/R^2)$ is the function of the Fourier criterion. In practice, this method consists in measuring the temperature on the surface and in the
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interior of a specimen (cylindrical in the present case), heated
at a constant rate in a specially designed furnace with low thermal
inertia. From the measured temperature gradient at the beginning
and end of each heating interval, and from the known heating rate,
$\Delta t_0/v\tau$ and $\Delta t/v\tau$ are calculated, after which the average value
of a is determined.   The advantage of this method consists in
that the formulae employed do not depend on the external heat
transfer conditions. The method used in the present investigation
for determining C is based on the principle of heat balance and
has been developed by "Gintsvetmet". It is best described with
reference to Fig.4, which shows the experimental assembly comprising
the following items: 1, the material tested;   2 and 3, screening
vessel and its lid;   4, electric furnace;   5, furnace cover;
6, portable potentiometer;   7, resistance box;   8, step-down
transformer;   9, mirror galvanometer; T_0, thermocouple measuring
the temperature at the specimen axis; T_c and T_n , differential
thermocouple housed in the screening vessel wall. A constant
quantity of heat per unit time is supplied to the specimen, and the
temperature t_0 at the specimen axis is measured as well as the
temperature gradient, Δt, across the screening vessel wall.
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When the temperature at the specimen axis is raised from zero to t °C, the heat balance is described by:

$$\left(F \frac{\lambda}{s} \rho\right) \Delta t_1 z_1 = q_{ak} + i_1 w_1 \tag{3}$$

where: F is the surface area (m^2) of the screening vessel through which heat is conducted; λ is the thermal conductivity coefficient of the screening vessel material (cal/m^2 h °C); s is the screening vessel wall thickness (m); ρ is a correction factor taking into account the fact that heat flows not through a flat surface but through a cylindrical wall and a lid; Δt_1 is the average temperature gradient across the screening vessel wall (°C); z_1 is the time (h) required to raise the temperature in the centre of the crucible from zero to t °C; q_{ak} is the heat (kcal) accumulated in the screening vessel in the time z_1; i_1 is the heat content (kcal/kg) of the specimen at t °C; and w_1 is the weight of the specimen (kg). The experiment is repeated three times: twice on a standard material with a known heat content, specimens of different weight (w_1 and w_2) being used each time, and

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once on the material studied, the weight of the test piece in this case being w_3. Three heat balance equations are obtained in this manner for each of the temperature intervals selected, and from these the formula for the heat content of the material studied is derived in the form of:

$$i_3 = \frac{i_2 w_2 - i_1 w_1}{w_3} \left(\frac{\Delta t_3 z_3 - \Delta t_1 z_1}{t_2 z_2 - t_1 z_1} \right) + \frac{i_1 w_1}{w_3} \quad (4)$$

Since it was found that the temperature-dependence of heat content of copper was not linear, nickel was used as the standard material in the present investigation. The results of the measurements of thermal diffusivity of the 48-OT-3 alloy are given in Table 1, under the following headings: 1) alloy temperature, ^{o}C; 2) a, m^2/h. The results of the specific heat measurements are tabulated and also reproduced graphically in Fig.6, where the specific heat C (kcal/kg ^{o}C) is plotted against the temperature (^{o}C), curve 1 showing the actual C at a given temperature, and curve 2 showing the average C for any 20 ^{o}C to t_o temperature interval. Finally,

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the data on thermal conductivity, calculated from $\lambda = ac\gamma$, are given in Table 2 under the following headings: 1) temperature, $^{\circ}$C; 2) λ, kcal/m h $^{\circ}$C.   The investigation was directed by Doctor of Technical Sciences D.I. Starchenko.
There are 6 figures, 3 tables and 3 Soviet references.

ASSOCIATION: Zhdanovskiy metallurgicheskiy institut
              (Zhdanov Metallurgical Institute)
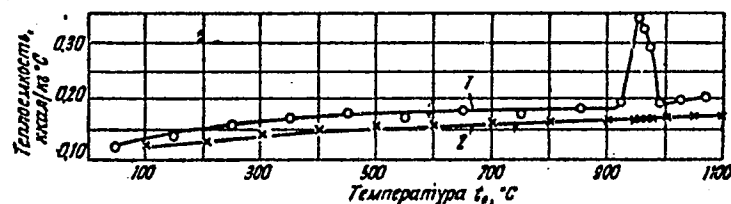

Fig.6

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S/136/63/000/002/004/006
E193/E383

AUTHORS: Starchenko, D.I. and Kuz'min, V.I.

TITLE: A study of the effect of speed on some parameters of
            rolling aluminium and copper

PERIODICAL: Tsvetnyye metally, no. 2, 1963, 62 - 67

TEXT: The authors studied the effect of the rolling speed
in the 4.55-30.1 m/s range on elongation, forward slip, friction
coefficient and roll-pressure in cold-rolling (dry and with
kerosene used as a lubricant) of copper and aluminium. The experi-
ments were conducted on a two-high stand with polished steel rolls,
290 mm in diameter and 500 mm long. The aluminium and copper
specimens measured, respectively, 3.9 x 200 x (700-1200) mm and
5.9 x 60 x 700 mm. All the results are reproduced graphically.
Thus, in Fig. 1, the elongation $\mu = \ell/L$ (where L is the
initial and ℓ the final length of the specimen) of aluminium
strip is plotted against the peripheral velocity of the rolls (m/s),
curves 1-6 relating to dry rolling with reduction per pass equal
to 0.42, 0.75, 0.85, 1.23, 1.33 and 1.97 mm, respectively, and
curves 7-12 representing results obtained with a lubricant, the
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corresponding reductions per pass being 0.27, 0.43, 0.71, 0.89, 1.26 and 1.58 mm. The coefficient of forward slip was defined as:

$$s = \frac{\ell_\Pi - \ell_B}{\ell_B}$$

where ℓ_B is the distance between two longitudinal (parallel to the roll axis) scratches on the roll surface and ℓ_Π is the distance between impressions made by these scratches on the rolled material. In Fig. 3, s(%) in rolling aluminium is plotted against the peripheral velocity of the rolls (m/s), curves 1-6 relating to dry rolling and values of μ equalling 1.12, 1.24, 1.28, 1.46, 1.51 and 2, curves 7, 9, 11, 12 relating to wet rolling and values of μ equalling 1.07, 1.23, 1.5 and 1.7. Finally, in Fig. 5, the average roll pressure (p, kg/mm²) in rolling aluminium is plotted against the peripheral velocity (m/s) of the rolls, curves 1-6 relating to dry rolling and values of μ equalling 1.11, 1.24, 1.28, 1.46, 1.52 and 2, curves 7-12 relating to wet rolling and values of μ equalling 1.06, 1.18, 1.21, 1.29, 1.46 and 1.63. It was concluded

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S/136/63/000/002/004/006
E193/E383

that, on increasing the roll speed to a sufficiently large degree, all the parameters studied changed in a favourable direction. This meant that by increasing the roll speed the production of the plant was increased with a corresponding decrease in the power consumption.   There are 6 figures and 1 table.

Card 3/3

ACCESSION NR: AR4041537   S/0137/64/000/004/D013/D016

SOURCE: Ref. zh. Metallurgiya, Abs. 4D92

AUTHOR: Dontsov, P. M.; Kuz'min, V. I.

TITLE: Riveting of austenitic steels during beding and straightening

CITED SOURCE: Sb. nauchn. tr. Zhdanovsk. metallurg. in-t, vy*p. 11, 1963,
123-126

TOPIC TAGS: austenitic steel, bending, straightening, riveting

TRANSLATION: During manufacture of high-quality profiles from austenitic steel
with high content of Mn (up to 17%) the necessary level of mechanical properties is
ensured when hot rolling is finished at a temperature $\leq 850°$. This is connected with
the special physical properties of the steel, due to which recrystallization in the
process of hot plastic flow is sharply braked at a definite temperature and
strength of the steel increased due to work hardening. Rolling of steel at a

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ACCESSION NR: AR4041537

higher temperature inevitably is accompanied by lowering to greater or lesser
degree the strength of the steel (σ_S usually decreases by 2-8 kg/mm^2), per and
articles become off-grade. The investigated metal by standard sizes of profiles
was divided into 2 groups: group I — equal side angle irons 25 x 25 x 3,
25 x 25 x 4, 30 x 30 x 4, 40 x 40 x 5 millimeters; group II — equal side angle
irons 60 x 60 x 8, 65 x 65 x 8, 90 x 90 x 8, 75 x 75 x 6 millimeters. Strips
rejected for insufficient magnitude σ_S were subjected in cold state to additional
bending and straightening; here the roller-type straightening machines are aligned
such that the arrow of sag and the wave of the strip were the maximum possible for
a machine of the given design. As an example there are given conditions of bending
and straightening of one of the experimental profiles on a 9-roller machine with
the step of the rollers 600 millimeters. The investigation gave the possibility
to offer a simple method of improvement of mechanical properties of high-quality
rolling from austenitic steels.

SUB CODE: MM   ENCL: 00

Card 2/2

KUZ'MIN, V.I.

Causes of scale being folded-in during rolling. Izv. vys. ucheb.
zav.; chern. met. 6 no.6:96-99 '63.   (MIRA 16:8)

1. Zhdanovskiy metallurgicheskiy institut.
                        (Rolling (Metalwork)--Defects)

Card 1/2

ACCESSION NR:

SOURCE: Ref. zn. Metallurgiya, Aug. ....

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rolling from the corresponding cold rolled metals. Rolling speed in

ACCESSION NR: AP4041044   S/0120/64/000/003/0170/0171

AUTHOR: By*chkov, Yu. F.; Goncharov, I. N.; Kuz'min, V. I.;
Khukhareva, I. S.

TITLE: Effect of heat treatment on the properties of superconductive
zirconium-niobium alloys

SOURCE: Pribory* i tekhnika eksperimenta, no. 3, 1964, 170-171

TOPIC TAGS: zirconium niobium alloy, superconductivity, alloy
critical current density, superconducting alloy, alloy critical tem-
perature

ABSTRACT: The effect of heat treatment on the critical temperature
(T_K) and critical current density (J_K) of niobium-zirconium alloys
containing 65—80% Zr was investigated. The alloy specimens were
melted from iodide zirconium and electron beam refined niobium in an
arc furnace in an argon atmosphere. After rolling from 5 to 1 min,
the specimens were annealed and rolled to 0.03—0.04 mm. The criti-
cal current density was measured at 4.2K in a magnetic field parallel
to the rolling plane and perpendicular to the current direction. The

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ACCESSION NR: AP4041044

dependance of T_K and J_K on annealing temperature in the 27-oe field is shown in Fig. 1 of the Enclosure. An increase in J_K after annealing at 400—500C was caused by a change in the structure of the β-phase or precipitation of the metastable ω-phase. The x-ray diffraction patterns revealed three phases on the specimen surface: an initial β-phase with 80% Zr, α-Zr, and a small quantity of β-phase with 15% Zr. At a depth of 0.05 mm, the α-phase and Nb β-phase with 15% Zr disappeared. Thus in the formation of new phases, an initial stage of recrystallization occurs only in a thin surface layer. Prolonged annealing at 570C raises the T_K, but lowers the J_K (see Fig. 2). Orig. art. has: 2 figures.

ASSOCIATION: Ob"yedinenny*y institut yaderny*kh issledovaniy (Joint Institute of Nuclear Research).

SUBMITTED: 12Jun63   ATD PRESS: 3076   ENCL: 02

SUB CODE: MM   ·NO REF SOV: 001   OTHER: 003

Card 2/4

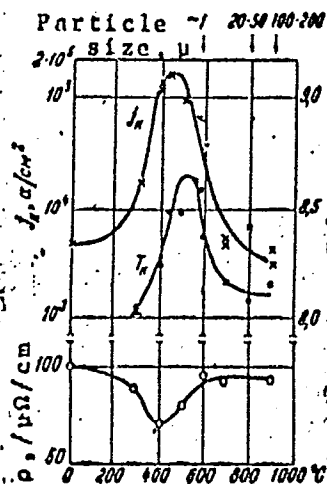ACCESSION NR: AP4041044   ENCLOSURE: 01

Fig. 1. Dependance of j_K and T_K on annealing temperature (annealing time 1 hr) for Nb + 80% Zr alloy (magnetic field 27 oe)

Card   3/4

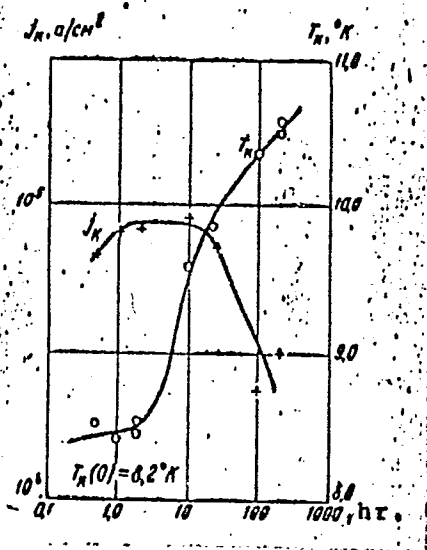ACCESSION NR: AP4041044

Fig. 2. Dependance of j_K and T_K on annealing time at 570C Nb + 80% Zr alloy (magnetic field 27 oe)

ACC NR: AT6032375   SOURCE CODE: UR/0000/66/000/000/0108/0114

AUTHOR: Davydov, V. P.; Semenov, L. V.; Kuz'min, V. I.

ORG: None

TITLE: The economic efficiency of processing low octane gasolines

SOURCE: AN SSSR. Institut goryuchikh iskopayemykh. Novyye sposoby polucheniya khimicheskikh produktov na osnove goryuchikh iskopayemykh (New methods for the preparation of chemical products based on mineral fuels). Moscow, Izd-vo Nauka, 1966, 108-114

TOPIC TAGS: petroleum engineering, fuel octane rating, pyrolysis, hydrocarbon, gasoline

ABSTRACT: The authors discuss the economic efficiency of processing low octane gasolines at the present time in the Soviet Union. The only method for processing low octane fractions that will be available up to 1970 is pyrolysis in tubular furnaces designed for gaseous and liquid raw hydrocarbons. Studies carried out by several institutes have proved the economic efficiency of pyrolytic processing of low octane gasoline fractions. This is explained by the fact that complex processing of raw hydrocarbons reduces capital investment and operating expenditures by the simultaneous production of an entire series of products as compared to the most progressive methods of producing them individually. Pyrolysis in tubular furnaces is the most

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ACC NR: AT6032375

efficient means for processing liquified gases and their mixtures with dry hydrocar-
bon gases and gasoline fractions. Two goals in processing low octane gasoline by py-
rolysis in tubular furnaces are considered: 1. chemical--producing a series of hy-
drocarbon and divinyl products for the chemical industry; 2. chemico-fuel (butylene-
divinyl)--concentrating on the production of a pyrocondensate used as a high octane
automobile fuel component. Projected statistics for 1970 show that 60% of the entire
requirement in pyrolytic raw materials will be filled by using low octane gasoline.
A table is given showing the economic efficiency of various pyrolytic processes based
on one million tons of low octane gasoline. These data show that high temperature
pyrolysis in tubular furnaces using the propylene process with subsequent complex py-
rolytic resin processing is most efficient. Such a process ensures practically the
same output of propylene, isobutylene, divinyl and 2.45 times more ethylene than the
butylene-divinyl process. An analysis of the technical and economic indices of com-
plex processing of low octane gasolines also shows the high economic efficiency of
extracting valuable chemical products from pyrolytic resin. Orig. art. has: 2
tables.

SUB CODE: 07/21/ SUBM DATE: 29Mar66

Card 2/2

L 07887-67   EWT(d)/EWT(m)/EWP(k)/EWP(h)/EWP(v)/EWP(l)   DJ/GD

ACC NR: AT6021733   (N)   SOURCE CODE: UR/0000/66/000/000/0105/0115

AUTHOR: Voytetskiy, V. V.; Kuz'min, V. I.

ORG: none

TITLE: The outlook for the use of universal hydraulic controllers in the automatic control systems of shipboard steam power plants

SOURCE: AN SSSR. Institut avtomatiki i telemekhaniki. Pnevmoavtomatika (Pneumatic automation). Moscow, Izd-vo Nauka, 1966, 105-115

TOPIC TAGS: automatic control system, hydraulic device, hydraulic equipment, pneumatic device, pneumatic control, marine engine, steam auxiliary equipment, steam power plant

ABSTRACT: Hydraulic control elements suitable for shipboard use in the steam power plant control system are described and their advantages over other devices are given. In the design of control systems for use on ships, special consideration must be given to the difficult operating conditions: a) operation in presence of rolling, vibration and shock stresses; b) high humidity and temperature of the ambient air; c) closed loop circulation for the feed water with overflow into reservoirs with excess pressure; d) considerable distances between the individual control elements; and e) possibility of feed water contamination. Current automatic control systems, based on feed water as

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L 07887-67
ACC NR: AT6021733

the control medium and jet type amplifiers have several disadvantages: a) lack of ac-
curate and smooth gain control, which necessitates tailoring of the modules to the spe-
cific purpose, precludes the use of universal elements; b) due to the input signal sum-
mation method through a common mechanical lever an interaction of these signals cannot
be avoided; c) the mechanical means for interconnection of various hydraulic elements
makes the system complex and inflexible; d) the jet amplifier, while reliable, has some
shortcomings, e. g., the limitation of the output power by the diameter of the valve
nozzle; and e) the summation of the input signals on a single mechanical lever requires
low friction bearings\\or knife-edge support. These are difficult to make and are par-
ticularly prone to failures. To overcome these disadvantages, universal control ele-
ments designed similar to widely-used pneumatic control elements were designed. The ex-
ception is that feed water is used as the control medium. The main module of this new
system is a membrane-type operational amplifier which can be used for a variety of pur-
poses. In the pneumatic system, the summation of the input signal can be realized
either through the resistance or membrane method. For the hydraulic system, the form-
er is more advantageous. Small-bore tubes are used as resistances (chokes). The per-
formance of a summation' hydraulic amplifier is analyzed in detail with diagrams, plots
and mathematical derivations. Orig. art. has: 10 figures.

SUB CODE: 13,14/   SUBM DATE: 03Feb66/   ORIG REF: 003/   OTH REF: 001

Card 2/2

KU: 'MIN, V.I.

Biology of flowering and the structure of flowers in the
knotweed Polygonum coriarium Grig. Bot. zhur. 49 no.5:725-
731 My '64.   (MIRA 17:8)

1. Botanicheskiy institut imeni Komarova AN SSSR, Leningrad.

KUZ'MIN, V. I.

Benign nonepithelial tumors of the stomach. Vop. onk. 8 no.4:
22-26 '62.   (MIRA 15:4)

1. Iz 2-go khirurgicheskogo otdeleniya (zav. - dots. V. I.
Yanishevskiy) Instituta eksperimental'noy i klinicheskoy
onkologii AMN SSSR (dir. - deystv. chl. AMN SSSR prof. N. N.
Blokhin)

(STOMACH—TUMORS)

PIRYATIN, Vasiliy Dmitriyevich; KUZ'MIN, V.I., kand. tekhn. nauk,
    otv. red.; NESTERENKO, A.S., red.; ALEKSANDROVA, G.P.,
    tekhn. red.

[Processing the results of experimental measurements by the
method of least squares]Obrabotka rezul'tatov eksperimental'-
nykh izmerenii po sposobu naimen'shikh kvadratov. Khar'kov,
Izd-vo Khar'kovskogo univ. Pt.1.[Linear and parabolic relation-
ships between measurement results]Priamolineinaia i paraboli-
cheskaia zavisimost' mezhdu rezul'tatami izmerenii. 1962. 215 p.

                                        (MIRA 15:11)

    (Least squares)   (Mensuration)

KUZ'MIN, V.I., dots., kand. tekhn. nauk; BULOKHOV, E.A., inzh.; TIL', A.V., inzh.

AIS-1 instrument used for locating faults in communication lines having steel and nonferrous metal wiring. Sbor. nauch. trud. LETIIZHT no.5:118-132 '53.   (MIRA 11:3)
(Pulse techniques (Electronics))   (Railroads--Communication systems)

KUZ'MIN, V.I., inzh.

Improve the designs and types of lake lumber rafts. Rech. trans.
18 no.8:22-23 Ag '59.   (MIRA 12:12)
(Lumber--Transportation)

KUZ'MIN, V.I., inzh.

Procurement, storage and processing of cotton in the Azerbaijan
S.S.R. Sbor.nauch.-issl.rab.TSNIIKHProma no.9:83-107 '62.
(MIRA 17:4)

KUZ'MIN, V.I., kand. tekhn. nauk.

Some results of experimentally evaluating errors of analogy by the mathematical statistics method. [Trudy] VNIMI no.31:105-113 '57.
(Ores—Sampling and estimation)   (MIRA 11:1)
(Mathematical statistics)

KUZ'MIN, V.I., dotsent; KRASNOPEROV, M.Ya., inzh.

Investigating the accuracy and conditions for using the standard specifications method. Izv.vys.ucheb.zav.; gor.zhur. no.11: 52-58 '58.   (MIRA 12:8)

1. Khar'kovskiy gornyy institut.
        (Donets Basin--Coal geology) (Prospecting)

KUZ'MIN, V.I., dotsent; ZARAYSKIY, V.N., inzh.

Extent of errors in the analogy of the reserves of mineral deposits. Izv. vys. ucheb. zab; gor.zhur. no.2:41-50 '61.   (MIRA 14:3)

1. Khar'kovskiy gornyy institut. Rekomendovana kafedroy marksheyderskcgo dela Khar'kovskogo gornogo instituta.

(Assaying)

VASIL'KOVA, N.N.; KUZ'MIN, V.I.

Alteration of datolite bearing rocks in the zone of hypogenesis. Geol.rud.mestorozh. no.6:68-71 N-D '61.   (MIRA 14:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya.
                    (Datolite)

KUZ'MIN, V. I.

Calculation of mean volume weight from a definite number of
calculations. Izv. vys. ucheb. zav.; gor. zhur. no.9:66-69
'61.   (MIRA 15:10)

1. Khar'kovskiy gornyy institut. Rekomendovana kafedroy
marksheyderskogo dela.

(Ores--Sampling and estimation)

KUVAYEV, N.N., kand. tekhn. nauk; KUZ'MIN, V.I., inzh.

Protecting installations in mining at great depths. Gor. zhur.
no.2:70-74 F'62.   (MIRA 17:2)

1. Krivorozhskiy opornyy punkt Vsesoyuznogo nauchno-issledovatel'-
skogo marksheyderskogo instituta.

ZARAYSKIY, V.N.; KUZ'MIN, V.I.

Determination of the variability of deposit indices with the aid
of secondary differences. Izv.vys.ucheb.zav.; geol. i razv. 8
no.1:94-96   Ja '65.   (MIRA 18:3)

1. Khar'kovskiy institut gornogo mashinostroyeniya avtomatiki i
vychislitel'noy tekhniki.

KUZ'MIN, V.I.

Third Moscow Conference of Young Oceanographers. Okeanologiia
2 no.5:944 '62.   (MIRA 15:11)
(Oceanography—Congresses)

BROVIKOV, I.S.; STREKALOV, S.S.; KUZ'MIN, V.I.

Theoretical concept of the energy spectrum of wind waves.
Okeanologiia 2 no.5:822-834 '62.

(MIRA 15:11)

1. Morskoy gidrofizicheskiy institut AN USSR.

(Waves—Spectra)

STREKALOV, S.S.; KUZ'MIN, V.I.

Empirical spectra of wind waves. Okeanologiia 2 no.1:67-71 '62.

(MIRA 15:2)

1. Morskoy gidrofizicheskiy institut AN USSR.

(Waves)

KUZ'MIN, V.I. inzh.

Increasing the strength and the wave resistance of rafts. Mech.
transp. 20 no.8:10-11 Ap '61.   (MIRA 14:10)
                              (Rafts)

ACC NR: AP7005676   (N)   SOURCE CODE: UR/0413/67/000/002/0148/0148

INVENTOR: Kraćulin, Yu. L.; Kozhevnikov, A. P.; Kuz'min, V. I.

ORG: none

TITLE: A method of ultrasonic welding with heating of the parts being welded. Class 49, 190763

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1967, 148

TOPIC TAGS: ultrasonic welding, ~~miniature part~~ welding technology

ABSTRACT: This Author Certificate introduces a method of ultrasonic welding with heating of the parts being welded. To improve the quality of the joints in welding miniature parts, the parts are heated indirectly through heat transfer from the electrically heated welding tool.   [MS]

SUB CODE: 13/   SUBM DATE: 03Jul64/   ATD PRESS: 5117

Card 1/1   UDC: 621.791.16

ACC NR: AP7001931   SOURCE CODE: UR/0125/66/000/012/0060/0061

AUTHOR: Krasulin, Yu. L.,; Kozhevnikov, A. P., Kuz'min, V. I. (Moscow)
(Moscow)   (Moscow)

ORG: none

TITLE: Ultrasonic welding of microcircuits with indirect heating of elements

SOURCE: Avtomaticheskaya svarka, no. 12, 1966, 60-61

TOPIC TAGS: microcircuit welding, ultrasonic welding, microelectronic circuit

ABSTRACT: A method has been developed for welding elements of micro-circuits made of dissimilar materials, for instance gold or aluminum welded to silicon or thin films deposited on a semiconductor or ceramic substrate. The method combines ultrasonic welding with simultaneous indirect preheating of the welded parts done by passing a current pulse through a section of the welding tool (See Fig. 1) Experiments showed that the timing of the application of ultrasound depends on the wire material. The best results in welding aluminum wire 0.1 mm in diameter to gallium arsenide and silicon, or gold, tantalum or aluminum films were achieved with ultrasound applied 0.3-0.4 sec prior to heat applica-tion. In the case of copper wire and gold film, ultrasound must be
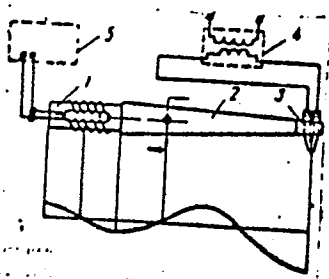
Card 1/2

ACC NR: AP7001931

Fig. 1
Layout of ultrasonic welder with indirect heating of welded elements.

1. Transducer; 2. waveguide; 3. welding tool; 4. heater; 5. ultrasonic generator

applied 0.2 sec after the heat application. Orig. art. has: 3 figures and 1 table.

SUB CODE: 13,09,14/SUBM DATE: 04Mar66/ ORIG REF: 004

Card 1/2

L 37002-66   EWT(m)/T/EWP(v)/EWP(t)/EWP(k)/ETI   JD/HM

ACC NR: AP6021487   SOURCE CODE: UR/0413/66/000/011/0129/0129

INVENTOR: Krasulin, Yu. L.; Kuz'min, V. I.; Nikitin, V. G.

ORG: none

TITLE: Method of pressure welding microscopic parts with indirect heat input. Class 49, No. 182490

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 11, 1966, 129

TOPIC TAGS: welding, micropart welding, pressure welding

ABSTRACT: This Author Certificate introduces a method of pressure welding microparts with indirect heat input supplied by an electrically heated punch. To preserve the initial properties of one of the welded materials, to facilitate the welding of low-ductility materials, and to increase the efficiency of the process, the punch is heated by a current pulse.   [ND]

SUB CODE: 13/ SUBM DATE: 30Jan64/ ATD PRESS: 5035

Card 1/1   UDC: 621.791.66

L 07887-67   EWT(d)/EWT(m)/EWP(k)/EWP(h)/EWP(v)/EWP(1)   DJ/GD

ACC NR: AT6021733   (N)   SOURCE CODE: UR/0000/66/000/000/0105/0115

69

AUTHOR: Voytetskiy, V. V.; Kuz'min, V. I.

67

ORG: none

TITLE: The outlook for the use of universal hydraulic controllers in the automatic con-trol systems of shipboard steam power plants

SOURCE: AN SSSR. Institut avtomatiki i telemekhaniki. Pnevmoavtomatika (Pneumatic automation). Moscow, Izd-vo Nauka, 1966, 105-115

TOPIC TAGS: automatic control system, hydraulic device, hydraulic equipment, pneuma-tic device, pneumatic control, marine engine, steam auxiliary equipment, steam power plant

ABSTRACT: Hydraulic control elements suitable for shipboard use in the steam power plant control system are described and their advantages over other devices are given. In the design of control systems for use on ships, special consideration must be given to the difficult operating conditions: a) operation in presence of rolling, vibration and shock stresses; b) high humidity and temperature of the ambient air; c) closed loop circulation for the feed water with overflow into reservoirs with excess pressure; d) considerable distances between the individual control elements; and e) possibility of feed water contamination. Current automatic control systems, based on feed water as

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L 07887-67

ACC NR: AT6021733

the control medium and jet type amplifiers have several disadvantages: a) lack of ac-
curate and smooth gain control, which necessitates tailoring of the modules to the spe-
cific purpose, precludes the use of universal elements; b) due to the input signal sum-
mation method through a common mechanical lever an interaction of these signals cannot
be avoided; c) the mechanical means for interconnection of various hydraulic elements //
makes the system complex and inflexible; d) the jet amplifier, while reliable, has some
shortcomings, e. g., the limitation of the output power by the diameter of the valve
nozzle; and e) the summation of the input signals on a single mechanical lever requires
low friction bearings||or knife-edge support. These are difficult to make and are par-
ticularly prone to failures. To overcome these disadvantages, universal control ele-
ments designed similar to widely-used pneumatic control elements were designed. The ex-
ception is that feed water is used as the control medium. The main module of this new
system is a membrane-type operational amplifier which can be used for a variety of pur-
poses. In the pneumatic system, the summation of the input signal can be realized
either through the resistance or membrane method. For the hydraulic system, the form-
er is more advantageous. Small-bore tubes are used as resistances (chokes). The per-
formance of a summation hydraulic amplifier is analyzed in detail with diagrams, plots
and mathematical derivations. Orig. art. has: 10 figures.

SUB CODE: 13,14/   SUBM DATE: 03Feb66/   ORIG REF: 003/   OTH REF: 001

Card 2/2

BORISOV, P.A.; KUZ'MIN, V.I.

Industrial waste of petroleum refining is a valuable raw material.
Stroi. mat. 11 no.8:21-22 Ag '65.   (MIRA 18:9)

CHUYEV, Yu,V., doktor tekhn. nauk, prof.; MEL'NIKOV, P.M.;
      PETUKHOV, S.I.; STAPANOV, G.F.; SHOR, Ya.B.; KUZ'MIN,
      V.I.; BOGOLYUBSKIY, V.S.; IVANUSHKO, N.D., red.

      [Principles of operations research in military technology]
      Osnovy issledovaniia operatsii v voennoi tekhnike. Moskva,
      Sovetskoe radio, 1965. 591 p.   (MIRA 18:10)

AUTHOR: Kuz'min, V.L.   SOV/128-58-11-19/24

TITLE: The New Technology in Fitting Production (Novaya tekhnologiya
                 proizvodstva fitingov)

PERIODICAL: Liteynoye proizvodstvo, 1958, Nr 11, p 30 (USSR)

ABSTRACT: A new technology for the casting of fittings was developed
                 at the "VEB Stahl und Walzwerk Gröditz" (GDR). The molding
                 boards, the upper and lower mold boxes and the two half parts
                 of the core boxes are centered on the guide pins, whereby
                 the core boxes reproduce not only the configuration of the
                 cores but also their arrangement in the mold. Cores and
                 molds are produced simultaneously. After opening the core
                 box, the lower part of the mold is put on the half core box
                 containing the core. After a turn of 180°, the half core
                 box is removed, leaving the core in the lower half mold,
                 which is then closed by the upper mold and is now ready for
                 casting.

                 1. Foundries--Equipment   2. Castings--Production

Card 1/1

KUZ'MIN, Vasiliy Leont'yevich; PROKHOROVA, V.A., red.; PETROV, G.P., tekhn.red.

[Under the banner of great friendship; on the 40th anniversary of the Chuvash Soviet Autonomous Republic] Pod znamenem velikoi druzhby; k 40-letiiu obrazovaniia Chuvashskoi sovetskoi avtonomii. Cheboksary, Chuvashskoe gos.izd-vo, 1960.   85 p.

(MIRA 14:2)

(Chuvashia--Economic conditions)

VASIL'YEVSKIY, V.N.; KUZ'MIN, V.M.; YUDIN, G.M.

Results of hydrodynamic studies carried out in the Sokolovogorsk
and Zhirnovsk fields. Trudy VNIGNI no.28:148-149 '60. (MIRA 14:4)

1. Vsesoyuznyy neftegazovyy nauchno-issledovatel'skiy institut.
                    (Oil reservoir engineering)

KORSHUNOV, A.P.; KUZ'MIN, V.M.

Results of the study of piezometric wells. Nauch.-tekh. sbor.
po dob. nefti no.15:82-86 '61.   (MIRA 15:9)

1. Vsesoyuznyy neftegazovyy nauchno-issledovatel'skiy institut.
            (Oil reservoir engineering)

KUZMIN, V.M.

Industrial hygiene in metallurgy. Med. letopisi 42 no.5-6:576-586
May-June 50.   (CLML 20:7)

1. Dr. Viktor M. Kuzmin, Head of the Department of Industrial
Hygiene and Specialist on Hygiene. Central Scientific Research
Institute on Labor Hygiene.

KUZMIN, V.M.

Industrial hygiene in metallurgy in Bulgaria. Med. letopisi 42
no.5-6:586-592 May-June 1950.   (CLML 20:7)

1. Dr. Viktor M. Kuzmin, Head of the Department of Industrial Hygiene
and Specialist on Hygiene. Central Scientific Research Institute on
Labor Hygiene.

88714

12 9100   23 11, 24 11

S/127/60/000/006/001/007
B012/B054

AUTHORS: Shul'ga, V. I., Engineer, Bekushev, Y. I., Engineer,
             Filippov, G. S., Engineer, and Kuz'min, V. M., Candidate
             of Technical Sciences (Leningrad)

TITLE: Test Results of the БАШ-250 (BASh-250) Drilling Unit

PERIODICAL: Gornyy zhurnal, 1960, No. 6, pp. 39 - 43

TEXT: The БАШ-250 (BASh-250) drilling unit was designed at the institut
Gipronikel' (State Design and Planning Scientific Research Institute of
the Nickel, Cobalt, and Tin Industry), and built by the test plant of the
Institute (in the third quarter of 1959). The first testing stage was per-
formed at Priozersk, Leningradskaya oblast', in the fourth quarter of 1959.
The results of this test are described. The second and final test will be
made in the third and fourth quarters of 1960. Vertical blast holes were
drilled in red granite with a hardness of 14 - 16 according to Protod' -
yakonov, 21 m deep, at a distance of 3 - 4 m from the bench edge. Rolling
cutters 214, 269, and 300 mm in diameter were used. The 214 mm cutters of the

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88714

Test Results of the БАШ-250 (BASh-250)   S/127/60/000/006/001/007
Drilling Unit   B012/B054

Povarovskiy zavod VNIIBT (Povarovo Plant of the All-Union Scientific
Research Institute of Drilling Technique) and the 269 mm cutters of the
Kuybyshevskiy mashinostroitel'nyy zavod (Kuybyshev Machine-building Works)
were armored with cylindrical teeth of ВК-8В (VK-8V) cemented carbide with
spherical working surface. The 300 (295) mm rolling cutters were armored
at the zavod Geopribortsvetmet (Geopribortsvetmet Plant) with cylindrical
teeth of ВК-15 (VK-15) cemented carbide with chisel-like working surface.
Compressed air was supplied to the drill hole by three mobile ДК-9 (DK-9)
Diesel compressors, each with an output of 8.5 - 9 m³/min at an operational
pressure of 6 atm excess-pressure. The essential technical data of the
unit are: drill hole diameter 250 mm, drilling depth 22.5 m, tool feed:
rope-hydraulic, chisel: three-cone, axle load: 25 t, speed of tool: 0 -
150 rpm, lifting speed: 4 m/min, tool feed: 0 - 21 m/h, removal of fines
from the hole: by compressed air, specific pressure of caterpillars on the
ground: 1.23 kg/cm², weight of the unit: 50 t, number of operators: 2. The
test results showed that the drilling rate attained the 1.2 - 1.8 fold with the
269 mm chisel, and the 1.4 - 1.8 fold with the 300 mm chisel, as compared

Card 2/3

88714

Test Results of the ~--250 (BASh-250)   S/127/60/000/006/001/007
Drilling Unit   B012/B054

to the 214 mm chisel. When perfect supports were available, all chisels
proved to be suitable even when 50% of the teeth were missing or worn out.
Some drawbacks were found which are to be eliminated until the second test.
It is stated in conclusion: With the drilling unit under review it is pos-
sible to drill holes in rock with a hardness of 14 - 16 at an average out-
put per shift of 24 m. It is convenient to use the unit for drilling holes
with rolling cutters, 250 - 390 mm in diameter. The rolling cutters men-
tioned are intended for drilling under scavenging, and therefore show
little durability. There are 1 figure and 3 tables.

ASSOCIATION: Institut Gipronikel' Leningrad (State Design and Planning
                 Scientific Research Institute of the Nickel, Cobalt, and
                 Tin Industry, Leningrad)

Card 3/3

KUZ'MIN, V. M.

Agricultural Machinery

Apparatus for applying fertilizer during the planting of potatoes. V. M. Kuz'min.
Sel. i sem. 19 No. 6, 1952.

Monthly List of Russian Accessions, Library of Congress, September 1952. Unclassified.

KUZMIN, V.M., kandidat tekhnicheskikh nauk.

      Attachment to a SR-6M sowing and planting machine for planting
of seedlings in checkrows and checkrow clusters. Sel'khozmashina
no.11: 15-16   N '54.   (MLRA 7:11)
         (Agricultural machinery)

USSR/Soil Science - Mineral Fertilizers.   J

Abs Jour   : Ref Zhur Biol., No 22, 1958, 100071

Author   : Kuz'min, V.M.

Inst   : Ukrainian Scientific Research Institute of Vegetable-
              Growing and Potatoes

Title   : Theoretical and Experimental Study of the Sowing Process
              of Granulated Fertilizers and Means of Their Mechaniza-
              tion

Orig Pub   : Nauchn. tr. Ukr. n.-i. in-t ovoshchevodstvo i kartofelya,
              1957, 4, 103-120

Abstract   : No abstract.

Card 1/1

Kuz'min, V.M., kand.tekhn.nauk

Planter attachment for checkrowing vegetables. Mekh.sil'. hosp.
9 no.3:8-9 Mr '58.   (MIRA 11:4)
            (Planters (Agricultural machinery))

KUZ'MIN, V.M., kand. tekhn. nauk

Research on the performance of machines used in checkrow
planting of vegetables. Mekh. sil'. hosp. 9 no. 6:26-29 Je '58.
(MIRA 11:7)

(Vegetable gardening)
(Planters(Agricultural machinery))

KUZ'MIN, V.M., kand.tekhn.nauk; IASTOVENKO, V.A., inzh.

SRN-4K plant setting machine. Mekh.sil'.hosp. 11 no.3:27-28
MR '60.   (MIRA 13:6)
            (Planters (Agricultural machinery))

KUZ'MIN, V.M., kand.tekhn.nauk

Working parts of potato harvesting machinery for separating
potatoes from soil. Mekh. sil'. hosp. 12 no. 1:30 Ja '61.

(MIRA 14:1)

(Potato digger (Machine))

KUZ'MIN, V.M., kand.tekhn.nauk; DZYUBA, V.I., inzh.-mekhanik

How to adjust SON-2,8 and SOSSh-2,8 planters for the wide-row
planting of vegetables. Mekh. sil". hosp. 12 no. 3:28 Mr '61.
(MIRA 14:4)

(Planters (Agricultural machinery))

KUZ'MIN, V.M., kand.tekhn.nauk

New working parts for separating soil from potatoes. Trakt. i
sel'khozmash. 31 no. 5:24-25 My '61.   (MIRA 14:5)
                          (Potato digger (Machine))

KUZ'MIN, Vladimir Nikolayevich [Kuz'min, V.M.]; KAMINSKIY, L.N. [Kamins'kyi, L.N.], red.; LIMANOVA, M.I. [Lymanova, M.I.], tekhn.red.

[Urgent objectives of trade-union organizations] Nevidkladni zavdannia profspilkovoi organizatsii. Kharkiv, Kharkivs'ke knyzhkove vyd-vo, 1959. 19 p.   (MIRA 13:4)

1. Zastupnik golovi zavkomu profspilki velosipednogo zavodu (for Kuz'min).
            (Trade unions)   (Efficiency, Industrial)

KUZ'MIN, V.N.; KURPAN, I.F.; RYNDIN, A.A.

All-Union expedition of pioneers and schoolchildren in commemoration
of the 40th anniversary of the Great October Socialist Revolution.
Geog. v shkole 20 no.3:1-6 My-Je '57.   (MIRA 10:6)
                         (School excursions)

BOLDYREV, G.P.; VOGMAN, D.A.; NOVOKHATSKIY, I.P.; VERK, D.L.; DYUGAYEV,
     I.V.; KAVUN, V.M.; KURENKO, A.A.; UZBEKOV, M.R.; ARSEN'YEV,
     S.Ya.; YEGORKIN, A.N.;KORSAKOV, P.F.; KUZ'MIN, V.H.; STRELETS,
     B.A.; PATKOVSKIY, A.B.; BOLESLAVSKAYA, B.M.; INDENBOM, D.B.;
     FINKEL'SHTEYN, A.S.; SHAPIRO, I.S.; LAPIN, L.Yu.. Prinimali
     uchastiye: NEVSKAYA, G.I.; FEDOSEYEV, V.A.; KASPILOVSKIY, Ya.B.,
     ZERNOVA, K.V.. BARDIN, I.P., akademik, otv.red.; SATPAYEV, K.I.,
     akademik, nauchnyy red.; STRUMILIN, akademik, nauchnyy red.;
     ANTIPOV, M.I., nauchnyy red.; BELYANCHIKOV, K.P., nauchnyy red.;
     YEROFEYEV, B.N., nauchnyy red.; KALGANOV, M.I., nauchnyy red.;
     SAMARIN, A.M., nauchnyy red.; SLEDZYUK, P.Ye., nauchnyy red.;
     KHLEBNIKOV, V.B., nauchnyy red.; STRETS, N.A., nauchnyy red.;
     BANKVITSER, A.L., red.izd-va; POLYAKOVA, T.V., tekhn.red.

[Iron ore deposits in central Kazakhstan and ways for their
utilization] Zhelezorudnye mestorozhdeniia TSentral'nogo Kazakh-
stana i puti ikh ispol'zovaniia. Otvetstvennyi red. I.P.Bardin.
Moskva, 1960. 556 p.   (MIRA 13:4)

1. Akademiya nauk SSSR. Mezhduvedomstvennaya postoyannaya
komissiya po zhelezu. 2. Gosudarstvennyy institut po proyektirovaniyu
gornykh predpriyatiy zhelezorudnoy i margantsevoy promyshlennosti i
promyshlennosti nemetallicheskikh iskopayemykh (Giproruda) (for
Boldyrev, Vogman, Arsen'yev, Yegorkin, Korsakov, Kuz'min, Strelets,
                              (Continued on next card)

BOLDYREV, G.P.--(continued).   Card 2.
       3. Institut geologicheskikh nauk AN Kazakhskoy SSR (for Novokhatskiy).
       4. TSentral'no-Kazakhstanskoye geologicheskoye upravleniye Ministerst-
       va geologii i okhrany nedr SSSR (for Verk, Dyugayev, Kavun, Kurenko,
       Uzbekov). 5. Nauchno-issledovatel'skiy institut mekhanicheskoy ob-
       rabotki poleznykh iskppayemykh (Mikhanobr) (for Patkovskiy). 6. Gosu-
       darstvennyy institut proyektirovaniya metallurg.zavodov (Gipromez) (for
       Boleslavskaya, Indenbom, Finkel'shteyn, Nevskaya, Fedoseyev, Karpi-
       lovskiy). 7. Mezhduvedomstvennaya postoyannaya komissiya po zhelezu
       AN SSSR (for Shapiro, Zernova, Kalganov). 8. Gosplan SSSR (for Lapin).
            (Kazakhstan--Iron ores)

ZHDANOV, A. P., KARTUYANSKIY, A. L., KUZ'MIN, V. N., RYZHKOVA, I. V., FEDOTOV, P. I., and SHUR, L. I.   (Moscow, USSR)

     "Preparation Des Emusions Nucleaires et Mecanisme I   ,eur Sensibilisation Par La Triethanolamine."

 paper presented at Program of the Second International Colloquium on Corpuscular Photography.   Montreal, 21 Aug - 7 Sep 1958.

Encl: B-3,114,647.

SOV-120-58-1-8/43

AUTHORS: Zhdanov, A.P., Kolpakov, M.I., Kuz'min, V.N., Raguzin, R.M., Fedotov, P.I.

TITLE: An Instrument for Measuring the Gap Lengths in the Tracks for Particles in Photo-Emulsions (Pribor dlya izmereniya prosvetov v trekakh chastits v fotoemul'siyakh)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1958, Nr 1, pp 46-47 (USSR)

ABSTRACT: The instrument is in the form of an eye-piece in whose field of view one sees a scale, a pair of parallel lines and the usual crosswire. The cross wire is set parallel to the track and the gap defined by the two parallel wires is moved along the track. This motion is achieved by means of the two micrometers shown in Fig.2. The motion of the two micrometers is independent of each other. There are 2 diagrams, no tables and 3 references, one of which is English

Card 1/2

SOV-120-58-1-8/43

An Instrument for Measuring the Gap Lengths in the Tracks for Particles in Photo-Emulsions.

and 2 Soviet.

ASSOCIATION: Radiyevyy institut AN SSSR (Radium Institute of the Academy of Sciences,USSR)

SUBMITTED: June 22, 1957.

1. Particles--Photographic analysis   2. Particles--Penetration
3. Measurement   4. Optical instruments--Applications

Card 2/2

AUTHORS: Zhdanov, A. P., Kuz'min, V. N.   57-28-5-34/36

TITLE: Preparation of Suspensions with Spherical Particles
                (Polucheniye suspenziy s chastitsami sharovoy formy)

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1958, Vol. 28, Nr 5,
                pp. 1118-1120 (USSR)

ABSTRACT: In order to obtain a solution with spherical particles,
                the authors employed the electric spark method. The
                discharge took place between two electrodes of pure
                beryllium in ethyl alcohol (96% alcohol). From experi-
                mental data (Reference 6) it is known, that: 1) At a
                single discharge a spherical cavity is produced in both
                electrodes. 2) The removal of metal from both electrodes
                is proportional to the energy stored in the condenser.
                3) The removal of metal from the anode and the cathode
                becomes comparable at a certain voltage and capacity. For
                this reason it is to be hoped to obtain particles of a
                certain size. The authors investigated the distribution
                of the beryllium particles according to their size (at
Card 1/3   various capacities of the condenser and at various volta-

Preparation of Suspensions With Spherical
Particles

57-28-5-34/36

ges) and their shape. The following experimental data were
ascertained: 1) At each single discharge a spherical ca-
vity was formed in each electrode. 2) The majority of
particles had a spherical shape (80%). 3) A number of
particles formed at each discharge (n $\gg$ 1). A series of
experiments was conducted in parallel with identical C and
U. All experiments yielded the same distribution of the
particles as to their size. Supplementary experiments with
other dielectrics (vaseline oil, transformer oil) show,
that in a more viscous medium the proportion of spherical
particles increases. The experiments conducted permit to
draw the following conclusions. 1) At a single discharge
a great number of particles is formed. 2) The distribution
with respect to size is apparently independent of the micro-
structure of the electrode surface, but is determined by
the electric parameters. 3) The viscosity of the medium
influences the shape of the produced particles. The great
proportion of spherical particles apparently indicates a
concentrated heat emission, which leads to a melting of the
metal and to its spottering. It was not the object of this

Card 2/3

Preparation of Suspensions With Spherical Particles   57-28-5-34/36

paper, to investigate this process in detail. The experiments show, however, that such an investigation will permit to clear the mechanism of such a discharge.
There are 2 figures and 6 references, 3 of which are Soviet.

ASSOCIATION: Radiyevyy institut AN SSSR im. V. G. Khlopina
(Radium Institute AS USSR imeni V. G. Khlopin)

SUBMITTED: May 6, 1957

1. Metals--Processing   2. Particles--Excitation   3. Spheres
--Properties

Card 3/3

The Effect of Saturation on the Magnetic-field Characteristics SOV/144-59-6-13/15
in Accelerators with Straight-line Sections

obtained are summarised in Figure 3.
3) Methods for the compensation of the effect of
saturation on the magnetic-field characteristics. It
is suggested that the best way to eliminate the effect
of saturation is to shape the magnet ends in a suitable
manner. Experiments have been carried out in order to
determine the best profile for the magnet ends and the
results obtained are illustrated in Figure 4.
There are 3 figures and 3 references, of which 2 are
Soviet and 1 Italian.

ASSOCIATION: Tomskiy politekhnicheskiy institut
(Tomsk Polytechnical Institute)

Card 2/2

21.2100

66543

AUTHOR: Kuz'min, V.N., Aspirant   SOV/144-59-4-11/13

TITLE: Determination of the Position of the Median Surface in the
           Gaps of Betatron and Synchrotron Electromagnets

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Elektromekhanika,
              1959, Nr 4, pp 113 - 117 (USSR)

ABSTRACT: In charged-particle accelerators the median surface of
          the magnetic field, i.e. the surface on which the radial
          component of the magnetic field is zero, must coincide
          within very narrow limits with the geometrical plane of
          the gap. In practice, there are small differences between
          these two surfaces and they are normally due to the fact
          that the electromagnet material is not completely uniform
          and to certain other factors such as the presence of iron
          in the neighbourhood of the machine, etc. Distortions in
          the median plane lead to a displacement in the position of
          the orbit and cause forced vibrations. The determination of
          the position of the median surface is difficult because the
          radial component of the magnetic field is small compared
          with the vertical component. Methods for this type of
          measurement have been described in the literature (Refs 2-4)

Card 1/3   but they all require a large air gap and their accuracy is